

# **Report**

**07/19/05**

## **1. Experimental Progress:**

- Rich and John have started installing the heat exchanger that will help us to control the temperature of the water. We are planning to use chilled water as a cooling medium.
  - Last week we have run the circulation pump everyday (7 to 8 hours each day). My observations are as following:
    - a) Any change in the system (change in piping, control valve etc.) causes inconsistent resistivity and pH readings.
    - b) Thursday we filled the reservoir with fresh water. The circulation pump was run everyday without disturbing the system until Monday. The resistivity data was more consistent.
    - c) After one-week of trial run during the day, we let the system run over night on Monday.
    - d) Approximate data during the trial run:
      - pH – 5.5 ~ 5.7
      - Resistivity – 1 ~ 1.3 Mohm-cm
      - DO – 7 ppm
- Today we realized that the lubricant used for the piping might be contaminating the water.

## **2. Status of various tasks from the project schedule:**

- APS Water System study - Completed
- Literature Survey - On going
- P&ID Diagram - Completed
- Experimental Set up - Completed, Minor modifications continuing on as needed basis.
- Experiment - Started aeration experiments.